REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
NSF Site Visit: GT/Emory Center for the Engineering of Living Tissues
May 16, 2001

Progress/programs:

- Research
  - 3 research areas: cardiovascular substitutes; encapsulated cell technologies (metabolic and secretory systems); orthopaedic tissue engineering.
  - 26 research projects underway in these three areas.
  - Center faculty authored almost 90 papers, more than half of them in 2000 (evidence of the Center's increasing productivity as it hits its stride).

- Education
  - **K-12 education**: "Prosthetic Pete" – an interactive display that visits schools; relationship with Grady HS (GT partner school) that offers lab tours and demos in career program; working with CEISMC to develop we-based materials for middle and high school.
  - **SciTrek**: collaborating on exhibits, outreach.
  - **Undergraduate education**: Research Experience for Undergraduates (REU) – 10-week internships for sophomores, juniors, and seniors, with lab work supervised and mentored by graduate students; seminars on bioengineering, ethical issues, and communication; field trips to bioengineering industries. Undergraduate Research Scholars (URS) – juniors and seniors; 1-year commitment with 1 semester credit and stipend; year-long research project with graduate student supervisor, potential for inclusion in publication.
  - **Graduate education**: Management minor in bioengineering entrepreneurship; 10-12 week industrial internships; seminar on how to mentor younger students; student council.
  - **Web-based outreach**: Working on a course for graduate students at other universities and persons working in bioengineering industry.
  - **Education Advisory Council**: advises on development of education programs; includes GT resources (CEISMC, distance learning, interactive media center) and a public school representative.
  - **Workshops/Short Courses**: Have held 3; most recent Engineering Tissues 2001 Workshop at Hilton Head, S.C. in Feb 2001 in collaboration with two other NSF ERCs. Engineering Tissues 2002 scheduled for Davos, Switzerland.
  - **Career Services**: Job opportunities through Petit Institute service.

- Industry
  - 15 member companies; foster intellectual exchange and collaborative research, newsletter, short courses, inside information on breakthroughs.

- Graduate research internships in industry.
- Industry Advisory Council.

Big Picture

- Georgia Tech/Emory Tissue Engineering Center fits into much larger context of Georgia Tech's commitment to biotechnology

- Partnership with Emory also includes Petit Institute, joint academic Biomedical Engineering Department
  - Offer 3 doctoral degree programs, over 100 students involved.
  - This fall begin undergraduate program, BS in bioengineering.
  - Already ranked #6 in nation just coming out of the chute – evidence of strengths Georgia Tech and Emory bring to partnership.

- Facilities
  - Bioengineering and Bioscience Building
  - Biomedical Engineering Building coming in 2003.

- Strong support for new building, educational and research programs from Whitaker and Coulter Foundations.

- These initiatives will strengthen and enrich programs of Tissue Engineering Center, even as Center contributes to them.

Conclusion

- ERC for Engineering Living Tissues is part of a larger, very exciting, and still evolving bioengineering and bioscience initiative. The synergy between the Center and the other components in the larger picture has benefited both:
  - The tremendous excitement generated by this larger initiative has enabled us to more than meet the one-to-one funding match we committed to NSF (includes Georgia Tech and Georgia Research Alliance funds).
  - The NSF Center enabled the tissue engineering research program, begun with funds from a 1993 Whitaker Development Award, to unfold faster and more fully that it otherwise could.

- Today 60% of our bioengineering faculty are involved with the Center, and we are known nationally and internationally for tissue engineering, more so than for any other area of bioengineering research.

- The larger program and wider recognition made possible by the Center have enabled us to leverage other resources – e.g., tissue engineering is one of the key areas in the Whitaker Leadership-Development Award which we received last year.